

Radiation Therapy for Cancers of the **Colon, Rectum and Anus**



Colorectal cancer is the third most diagnosed cancer in the United States. Radiation therapy is often used to treat these cancers by killing cancer cells while preserving your normal organs. Treatment may also involve surgery and medication. These treatments are customized to each patient depending on location, type and extent of cancer as well as an individual's other medical problems.



Rectal Cancer

Certain cancers of the rectum are treated with radiation therapy along with surgery and chemotherapy. This combination gives the highest chance of eliminating cancer cells. Radiation therapy may be given either before or after surgery. It is given together with a lower dose of chemotherapy during the weeks of radiation therapy in order to weaken cancer cells. This combination makes radiation therapy more sensitive and effective at killing the cancer.

The benefits of radiation therapy for rectal cancer are:

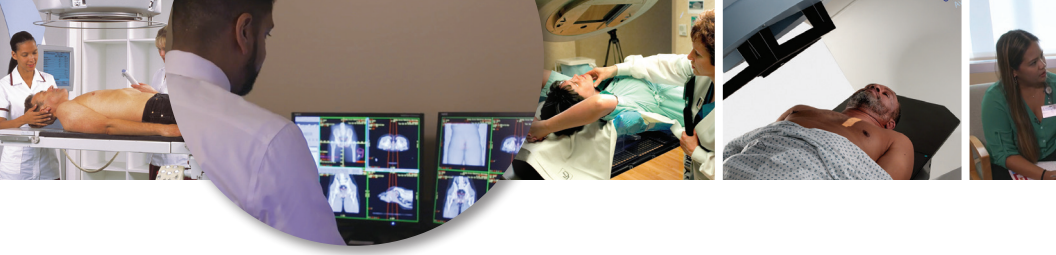
- It makes the tumor smaller and easier to remove completely during surgery.
- It may allow surgeons to remove the tumor but preserve the anus. This means that you will continue to have control of your bowel movements through the anus. It will avoid the need for a colostomy, a bag worn on the outside of the abdomen to collect stool.
- It lowers the risk of cancer returning in the pelvic area.

Radiation therapy is given over a period of weeks. A small dose is given each day to the rectum and other areas in the pelvis which may kill cancer cells that may have spread from the original location.

Anal Cancer

Most cancers of the anus can be cured using radiation therapy and chemotherapy alone. This cancer is not typically removed with surgery. Instead, radiation therapy and chemotherapy are given at the same time to kill cancer cells. This means that after treatment you will continue to have control of your bowel movements through the anus.

Radiation therapy is given over a period of weeks. A small dose is given each day to the anus and other areas around the pelvis and groin which kill cancer cells that may have escaped from the original location.



Colon Cancer

Most colon cancers are treated without radiation therapy. In special cases, radiation therapy may be helpful to prevent cancer from spreading into other organs that don't move, for example, when the colon cancer grows into other areas, such as the wall of the abdomen.

Cancer That Has Spread

If cancer of the rectum, anus or colon has spread to other areas of the body, giving radiation therapy to these areas may be valuable. It can shrink or destroy these cancer areas to stop symptoms. Using radiation therapy to manage symptoms like pain, swelling, bleeding and further spreading to other parts of the body is called palliative radiation therapy.

In some cases when cancer has spread to only a few small spots, special radiation therapy techniques called stereotactic radiation therapy (sometimes called SBRT or SRS) can completely destroy these small spots.

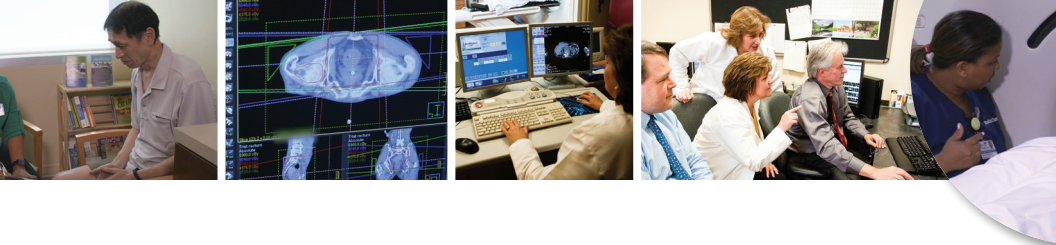
Cancer That Has Returned

In some cases, if cancer has returned in the same area that was previously treated, radiation therapy to the pelvis for a second time may be necessary. A second course may be necessary to destroy the new tumor, to shrink it so that it can be removed or to stop it from growing further.

COMBINED TREATMENT TO GET THE BEST OUTCOME

While surgery is essential for treating most cancers of the rectum, radiation therapy is typically used for anal cancer. Chemotherapy is added to radiation therapy in cancers of the rectum and anus to increase cure rate.

Radiation therapy involves giving high energy X-rays to the specific area of the body that contains cancer. The dose is shaped to fit the cancerous area, damaging or killing the cancer cells. Surrounding normal, healthy tissues usually receive a lower dose than the cancer. The lower dose may cause temporary side effects and the chances of severe permanent side effects are very low. Over the past few years, radiation therapy equipment and technology has improved to allow more precise delivery of radiation therapy



to the cancer. It also has allowed the normal, healthy areas of the body to receive even less radiation than it received in the past. So many of the side effects that occurred in the past are now very uncommon.

Surgery may be needed to obtain a piece of the cancer that needs to be examined in order to make a diagnosis. Surgery is required in order to remove colon and rectal cancers and any nearby areas that have a lot of cancer cells. Surgery is less frequently used to remove anal cancers. Chemotherapy and radiation therapy are given together to kill the cancer without removal of the anus.

Medical Therapy

Medication is also an important treatment to destroy cancer cells and improve cure rates. Medications may include chemotherapy and immunotherapy. Immunotherapy is a cancer treatment that helps your immune system fight cancer. The drugs or other targeted substances attack specific cancer cells and reduce the risk of cancer spreading in the body. The doses may be given daily, weekly or every few weeks and can be given by pills or liquids that are delivered directly into veins.

What happens when you need to have radiation therapy

External beam radiation therapy uses invisible beams (X-rays) that are designed to pass through the body and release cancer-killing energy directly inside the cancer cells. Before you start treatment, a radiation area will be mapped to target your unique cancer while sparing normal, healthy parts of the body. This is done using a CT scan of the pelvis that you will receive at the treatment center. This session is called a simulation. You may have tiny dots tattooed in your skin. Radiation therapists use these dots to position you so that the radiation is precisely delivered to go where it is planned.

You may need to wait a few to several days before starting treatment. The clinical and technical team will use the simulation scan to design your custom treatment area that covers the tumor area with cancer-killing radiation doses with much lower radiation doses to the normal, healthy parts of the body. This is called your radiation plan. It is then sent to the



linear accelerator, the machine that delivers the radiation. There are many advanced techniques to achieve a radiation plan and your radiation oncology team will select the best type for your case.

When you start radiation therapy, the sessions are often given daily (Monday through Friday) for a few weeks. It is necessary to give small doses per day for a period of weeks to add up to a dose to kill the cancer. Small daily radiation doses allow healthy parts of the body to recover so they do not get damaged.

For treatment, you will be placed on the treatment table by therapists who are operating the radiation machine. They will ensure that you are correctly aligned by doing X-rays or scans. Once you are in the correct position the beam is switched on.

You will not feel anything while radiation is going into the tumor. Radiation is confined to the pelvis. Parts of the linear accelerator will move around you but will not contact you.

CARING FOR YOURSELF DURING TREATMENT

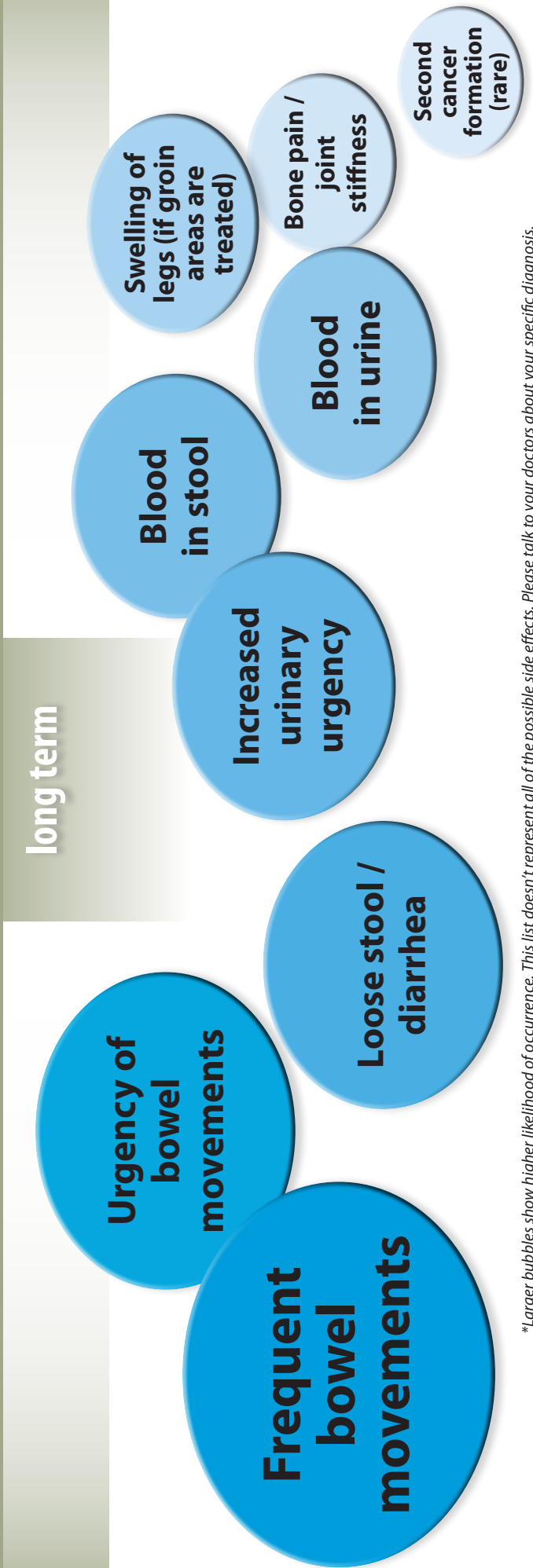
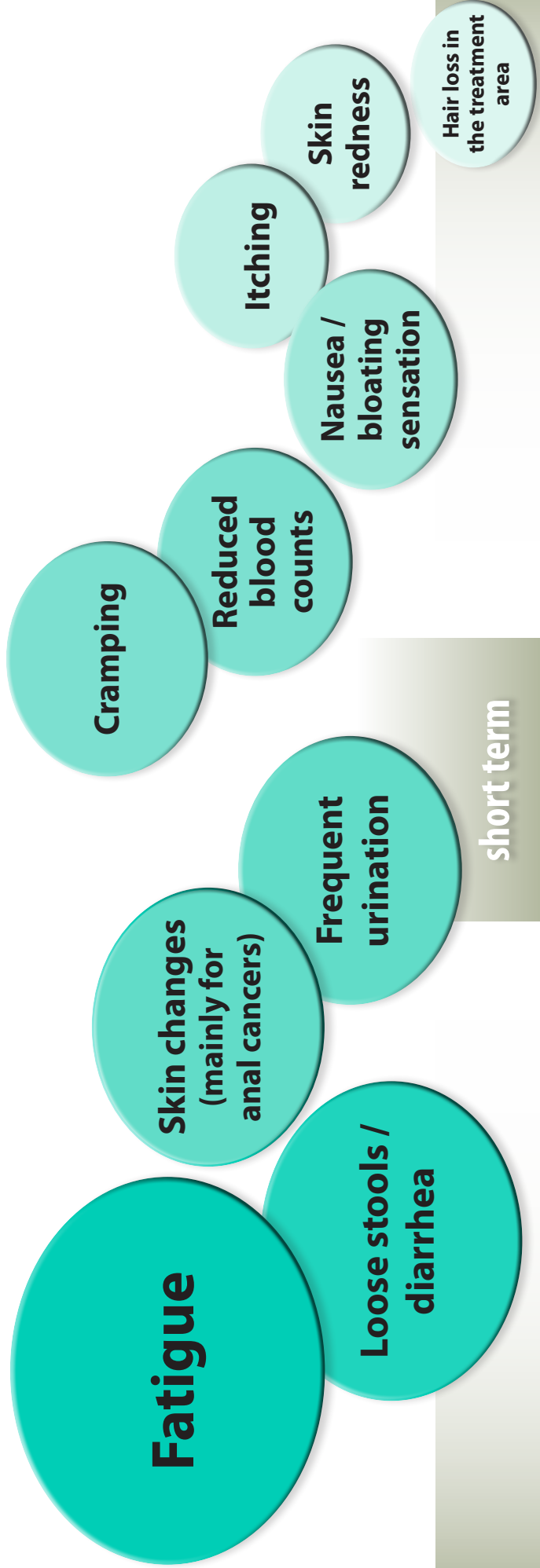
It is important to care for yourself during radiation therapy. Things that you can do to help with healing and prevent some symptoms include:

- Take all medications as prescribed.
- Eat a well-balanced healthy diet. You can speak to a dietitian for any advice about what to eat.
- Drink adequate amounts of liquids to stay well hydrated.
- Clean the skin over the areas receiving radiation therapy very gently with warm water and mild soap.
- Stay active and do some physical exercises each day.
- Communicate with your family, friends, or support group. Ask any questions you may have to your nurse or doctor.

If you have a support network in place before and during treatment, it will be easier to get through side effects since people you can count on will be around to help you. If you need additional support, let your treatment team know.

RT for Colon, Rectum and Anus Cancers Side Effects

more likely ← less likely →



*Larger bubbles show higher likelihood of occurrence. This list doesn't represent all of the possible side effects. Please talk to your doctors about your specific diagnosis.



ABOUT THE RADIATION ONCOLOGY TEAM

Radiation oncologists are the doctors who oversee the care of each person undergoing radiation treatment. Other members of the treatment team include radiation therapists, radiation oncology nurses, medical physicists, dosimetrists, social workers and nutritionists. For information on what each of these professionals does or to locate a radiation oncologist near you, visit www.rtanswers.org.

ABOUT ASTRO

The American Society for Radiation Oncology is the largest radiation oncology society in the world with more than 10,000 members who specialize in treating cancer with radiation therapies. ASTRO is dedicated to improving patient care through education, clinical practice, advancement of science and advocacy. Visit www.astro.org for more information.

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